Site Engineering Report

Roemer Residence
49 Birch Road
Darien, Connecticut

Prepared for:

Eric Roemer
49 Birch Road
Darien, CT 06820

Date Prepared:

July, 2020

Prepared by:
DiVesta Civil Engineering Associates, Inc.

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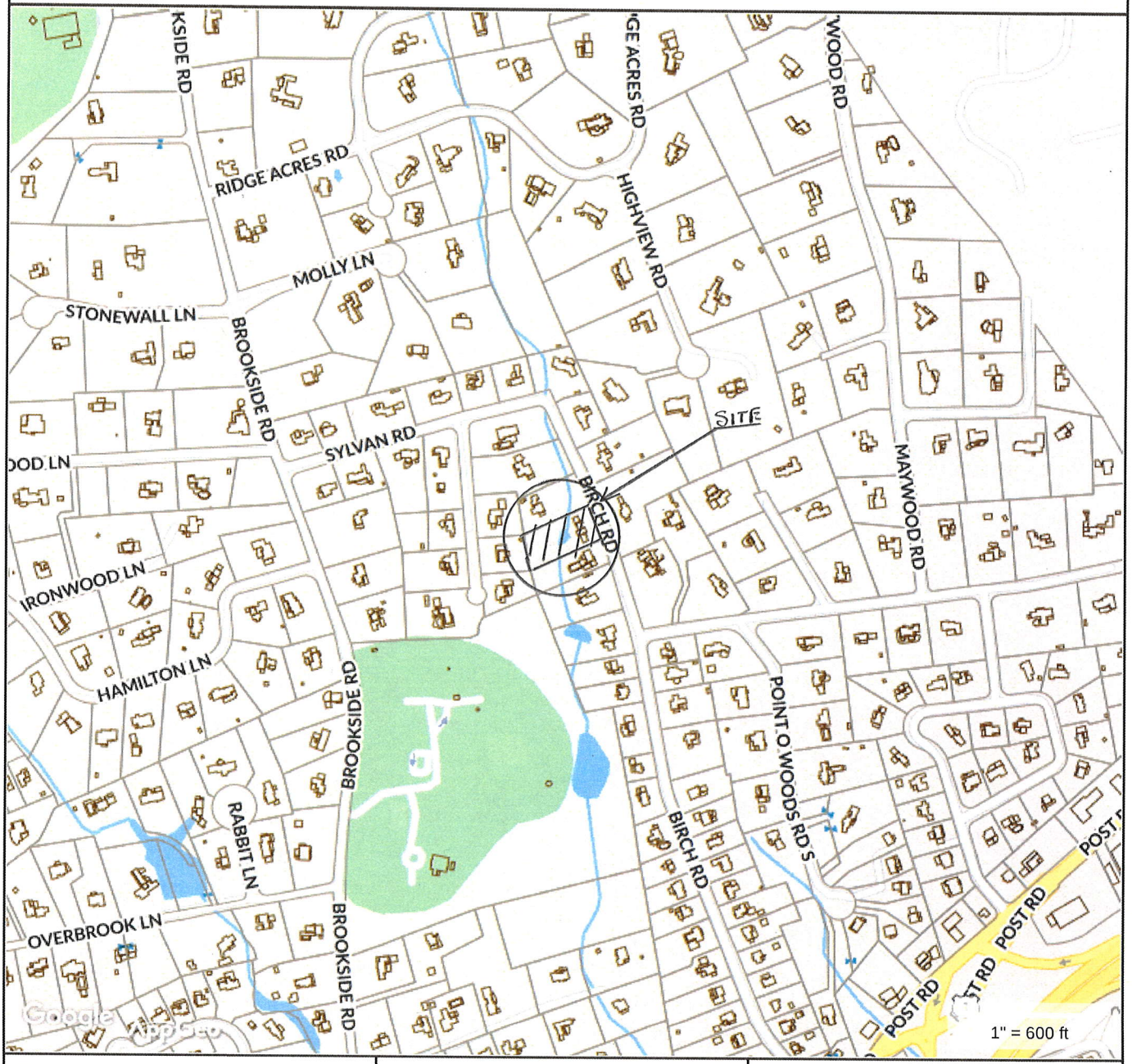
Town of Darien, CT

July 14, 2020

49 Birch Road



MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

Town of Darien, CT makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 8/1/2019
Data updated 8/1/2019

Introduction

This report has been prepared to present technical information in support of the construction of a pool, pool patio and a future pool house located on the west side of the Tokeneke Brook. The Tokeneke Brook bisects the property from north to south into a pond then overflows into a continuation of the brook. The property is located at 49 Birch Road in the R-1 Zone of Darien.

Existing Site Conditions

The subject property is located on the west side of Birch Road. The property has a total lot area of 1.0238± acres or 44,598 ± square feet. Currently access to the rear portion of the property is via two foot bridges over the Tokeneke Brook. There is a dam along the southern property line that creates a pond along the southern property line. The existing house is located on the easterly side of the Tokeneke Brook with a paver stone driveway accessing the property. The parcel is bordered by residential properties on three sides with Birch Road to the east.

The rear portion of the parcel slopes mildly from the northwest to the southeast towards the Tokeneke Brook and the pond. The property consists of manicured lawn throughout the rear portion of the property. There are mature trees throughout the property and woods towards the rear and northerly property lines.

Regulated Activities

The property was field checked for wetlands by Tom Pietras of Pietras Environmental Group, LLC on 5/26/15 and field located by the project surveyor. The easterly side of the brook and pond are the limits of the wetlands. The westerly side encroaches into the rear yard. It is proposed to cross the brook at the northern foot bridge, which is the narrowest portion of the wetlands and brook, in order to construct the pool, pool patio and future pool house. There will be the installation of a force main under the brook for a future pool house with a bathroom. All of the proposed construction will take place in the upland review area of the wetlands. The wetlands boundary is shown on the site plan.

Project Description

The proposal for this site consists of the construction of a pool, pool patio and a future pool house with a bathroom. Other work associated with this project will be the construction of a short retaining wall to limit the proposed grading and the encroachment onto the wetlands, minor regrading around the pool and patio and the installation of sub-surface stormwater management system to control the post development runoff from the pool, pool patio and the future pool house.

Stormwater Management

Based on the existing topography the runoff from the rear portion of the property drains in a south easterly direction towards either the Tokeneke Brook or the pond located on the property. We took into consideration the existing conditions in developing the pre development peak rate of runoff which consists of a lawn area.

Developed Site Runoff Characteristics

Development of the site will include the construction of a pool, pool patio and a future pool house. The analysis that was conducted on this site was to compare the pre-development conditions which consist of a lawn area and compare it to the post-development conditions which will consist of the pool, pool patio and future pool house and lawn. The goal for the project is to manage the runoff so that post-development peak rate of runoff will be equal to or less than pre-development peak rate of runoff.

It is proposed to collect the runoff from the proposed pool, pool patio and the future pool house and direct it to a subsurface detention system located in the southwest corner of the property. The detention system will consist of 3 units each of Cultec Contactor 100. The water detained in the system will exfiltrate into the surrounding soils and be metered out through a control release structure where the runoff will bubble out the overflow grate and sheet flow in a southerly direction. The remaining portion of the property will sheet flow in an easterly direction as it currently does. Adding this outlet flow from the detention system to the remaining flows from the site provides a flow that is less than or equal to pre-development flows for all design storms. (Please see the chart below for a summary of our findings.)

The methodology used to determine the peak rate of runoff was TR-20 computer model by HydroCAD. The 2, 10, 25 and 50 year, 24-hour design storms were used for the analysis of this property. We calculated the runoff for the whole site to determine the peak rate of runoff from the site. We looked at the pre development conditions and then compared it to the post-development conditions with detention.

Summary:

	2 Year Storm Event (CFS)	10 Year Storm Event (CFS)	25 Year Storm Event (CFS)	50 Year Storm Event (CFS)
Pre Development	1.0	1.9	2.3	2.7
Post Development	1.0	1.9	2.3	2.7

Based on our findings the post-development peak rate of runoff for the proposed site plan will be less than or equal to pre-development conditions for all storms analyzed.

Site Utilities

Water Supply

The site is currently served by municipal water locate in Birch Road.

Sanitary Sewer

The site is currently connected to the sanitary sewer located in Birch Road

Sedimentation and Erosion Control Narrative

Regrading of the existing contours will be required for the proposed pool, pool patio and future pool house. All regrading on site will have a minimum ratio of three feet horizontal to one-foot vertical slope if not flatter. Care should be taken to control runoff during the initial stage of excavation for the proposed driveway and proposed new residence.

Prior to any excavation the perimeter silt fence shall be installed and maintained throughout the life of the project until all areas have been stabilized. At the end of the workday and weekend and during rain events, staked hay bales are to be installed at the construction entrance to reduce runoff from entering the Tokeneke Brook or the pond.

Any soil stockpiles will be ringed with silt fence.

Reference is made to the Sedimentation and Erosion Controls on the site plan, which are, along with this text included in the report, part of the Sedimentation and Erosion Control Plan for this project.

Construction Sequence

1. Obtain all agency approvals before applying for a building permit.
2. Install the temporary brook crossing to access the construction area as per the approved site plan; install the dewatering ring; install the temporary sand bag dam above and below the crossing; pump water around the crossing area.
3. Once the temporary crossing is installed and all permits have been issued remove trees and stumps within the area of the pool and future pool house and stormwater management systems.
4. Install silt fence per approved plans.
5. Rough in the proposed construction access.
6. Start excavation for the pool; all material from the pool excavation shall be removed from the property.
7. Start the installation of the pool.
8. Once the installation is completed back fill around the pool.
9. Install the detention system per the approved plan.
10. Install channel drains around the pool coping and connect to the detention system.
11. Final grade around the detention basin, topsoil and seed the area.
12. Install the force main from the grinder pump for the future pool house.
13. Complete the construction of the pool patio.
14. Final grade the property, topsoil and seed.
15. Remove the temporary construction access to the pool area. Topsoil and seed the area.
16. Remove the temporary construction access across the brook. Install the force main brook crossing per the approved plan.
17. Once the crossing is complete reinstall the foot bridge crossing the brook.
18. Remove the sedimentation and erosion controls once the area is stabilized and/or directed by the EPC staff or the project engineer.

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Appendix A:

Operation & Maintenance Plan

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Stormwater Management
Operation and Maintenance Plan
For
Roemer Residence
Darien, Connecticut
July 14, 2020

The object of the stormwater management operation and maintenance plan is three fold; 1) is to collect the runoff from the proposed pool patio and future pool house and convey the runoff into the detention system, 2) once the runoff has been collected and conveyed to the detention system where the flows will be metered out to control the runoff from the site, 3) the detention system will detain the runoff from impervious areas and control the increase in runoff from the proposed pool area and future pool house.

Maintenance Measures

1. Inspect the junction box sump bi-annually. Remove any accumulation of sediment and leaves from the sump and dispose of the accumulated sediment properly.
2. Inspect annually the channel drain around the pool coping and pool patio to ensure thay they are clear and free of buildup of debris.
3. Inspect annually the roof drains to ensure that they are clear and free of buildup debris and that there are no blockages and that the pipes are free flowing.
4. Removal of any accumulated sediment will ensure that the detention system will function properly.

Roemer Residence

Appendix B:

Hydrology Calculations

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Appendix C:

Soils Report / Web Soils

DiVesta Civil Engineering Associates, Inc.

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PIETRAS ENVIRONMENTAL GROUP, LLC

WETLAND DELINEATION REPORT

Date: June 1, 2015

PEG JOB#: 2015-82

Prepared for: William W. Seymour & Associates, P.C.
170 Noroton Avenue
Darien, CT 06820

Project Location: 49 Birch Road, Darien, CT

Site Map: property map

Inspection Date: May 26, 2015

Field Conditions: weather: partly sunny, 80's soil moisture: moist

Legislative Definitions of Wetlands and Watercourses in CT (General Statutes, Chptr 440, Sec. 22a-28 to 22a-45)
Tidal Wetlands are defined as "those areas which border on or lie beneath tidal waters, such as, but not limited to banks, bogs, salt marsh, swamps, meadows, flats, or other low lands subject to tidal action, including those areas now or formerly connected to tidal waters, and whose surface is at or below an elevation of one foot above local extreme high water; and which may grow or be capable of growing some, but not necessarily all of the following:" (includes plant list) sec. 22a-29(2).

Inland Wetlands "means land, including submerged land, not regulated pursuant to sections 22a-28 to 22a-35, inclusive, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service (NRCS) of the United States Department of Agriculture" section 22a-38(15).

Watercourses "means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private which area contained within, flow through or border upon this state or any portion thereof, not regulated pursuant to sections 22a-28 to 22a-35, inclusive. Intermittent watercourses shall be delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation" section 22a-38(16).

Regulated Wetlands and Watercourses Identified:

Inland Wetlands: **yes** Watercourses: **yes** river: brook: **XX** lake: pond: **XX**
Tidal Wetlands: **no** intermittent watercourse:
Wetland boundary flag #'s: **1 thru 6**

Local Regulated Upland Review Area: From Wetlands: 50 feet From Watercourses: 50 to 200 feet

All established wetlands boundary lines are subject to change until officially adopted by local and state agencies.

Thomas W. Pietras

Thomas W. Pietras
Professional Wetland and Soil Scientist

Thomas W. Pietras

Digitally signed by Thomas W. Pietras
DN: cn=Thomas W. Pietras, o=Pietras Environmental Group, LLC, ou, email=tom@pietrasenvironmentalgroup.com, c=US
Date: 2015.05.31 17:16:34 -04'00'

15 Briarwood Lane
Wallingford, CT 06492
203-314-6636

EMAIL Tom@pietrasenvironmentalgroup.com
WEB SITE pietrasenvironmentalgroup.com

Thomas W. Pietras, Professional Wetland and Soil Scientist, conducted a site inspection to the subject property on May 26, 2015. The 1.02+/- acre property is developed with a single family house, asphalt driveway and grassed lawn. A pond is located in the rear yard. The pond was created within historic wetlands through a combination of excavation and forming a berm. Tokeneke Brook flows through the property and feeds the pond. The brook has been channelized through the property and is confined by a channel with steep embankments.

A spade and auger were used to dig test holes on the property. The classification system of the National Cooperative Soil Survey and the USDA Natural Resources Conservation Service was utilized for identification of soil drainage classes and soil types. The soil types identified on the property were assigned soil map numbers according to the State of Connecticut Soil Legend. Locations of soil types identified are shown on a sketch map that is included with this report. Inland wetlands are regulated by CT General Statutes, Chapter 440, Sections 22a-36 to 22a-45. The State defines wetlands as land consisting of any of the soil types designated as poorly drained, very poorly drained, alluvial and floodplain by the National Cooperative Soil Survey. The boundaries of the wetlands identified on the property were delineated with consecutively numbered, survey tapes. Approximate location of the wetlands are also shown on the soil and wetland sketch map. Brief descriptions of the soil mapping units are included in this report. Additional information about the soils identified on the property can be found in the Soil Survey of the State of Connecticut (www.nrcs.usda.gov.ct.soilsurvey).

Wetlands, identified as poorly drained Ridgebury fine sandy loam (2), are present on the western side of the pond and brook. The wetlands have been partially drained as a result of the channelization of Tokeneke Brook and the creation of the pond. In addition, a shallow (6 to 12 inches) layer of loamy fill overlies the buried Ridgebury soil profile. The wetlands on the property primarily support grassed lawn with a few scattered red maple trees.

Thomas W. Pietras

Respectfully submitted,

Thomas W. Pietras, Professional Wetland Scientist and Soil Scientist
PIETRAS ENVIRONMENTAL GROUP, LLC

WETLAND SOILS

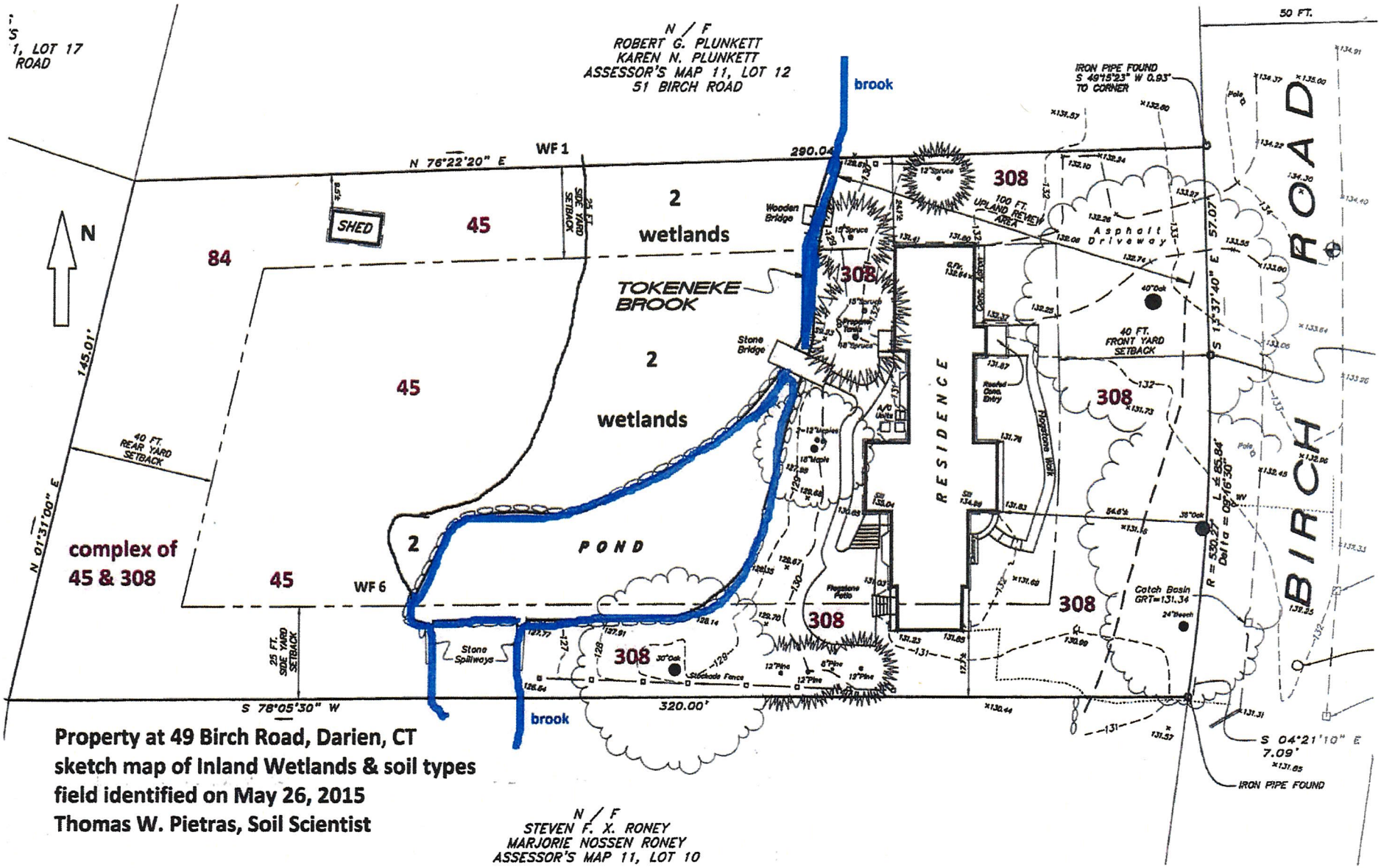
2 Ridgebury fine sandy loam (Aeric Epiaquepts) - This is a deep, poorly drained, glacial till soil that developed in a friable, coarse-loamy textured solum overlying dense, basil till (hardpan). The till was derived from schist, gneiss and granite. Ridgebury soils occur on glaciated plains, hills and ridges. The hardpan is within 20 to 30 inches of the soil surface and it has very slow permeability. A seasonal, perched ground water table is typically present within a foot of the surface from late fall through mid-spring.

NON-WETLAND SOILS

45 Woodbridge fine sandy loam (Aquic Dystrudepts) - This is a deep, moderately well drained, glacial till soil that developed in a friable, coarse-loamy textured solum overlying dense, basal till (hardpan). The till was derived from schist, gneiss and granite. Woodbridge soils occur on glaciated plains, hills and ridges. The hardpan is within 20 to 40 inches of the soil surface. A seasonal water table is present between 18 and 30 inches of the surface.

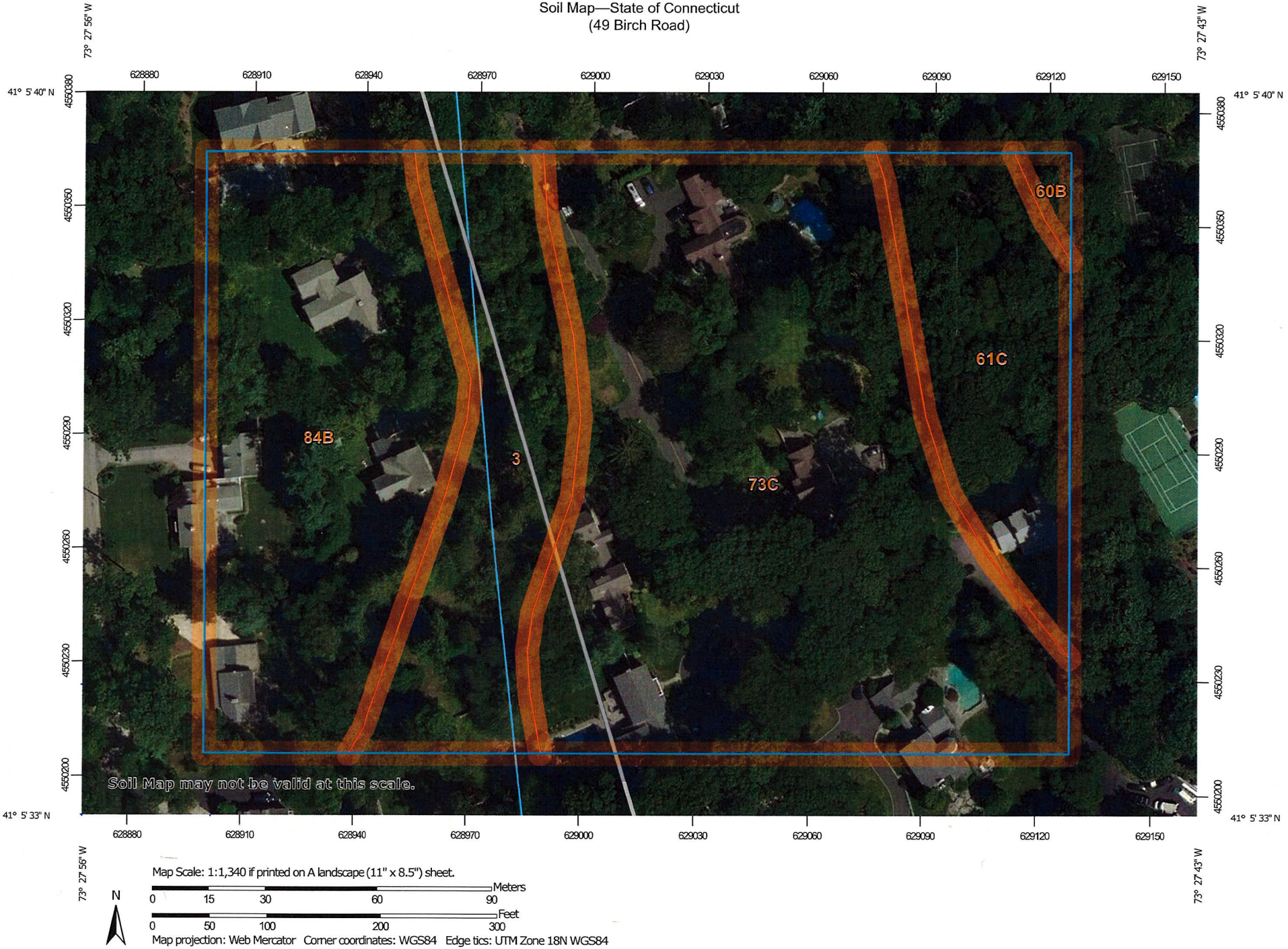
84 Paxton and Montauk fine sandy loams (Oxyaquic Dystrudepts) - These are deep, well drained, glacial till soils that developed in a friable, coarse-loamy textured solum overlying dense, coarse-loamy to loamy sand textured, basal till (hardpan). The till was derived from schist, gneiss and granite. Typical depth to hardpan is 30-40 inches. An occasional perched, seasonal water table is present between 24 and 36 inches of the surface. Paxton and Montauk soils occur on glaciated plains, hills and ridges.

308 Udorthents, smoothed - This is a well drained to moderately well drained, disturbed soil area that has had two or more feet of the original soil surface altered by filling, excavation or grading activities. Udorthents, smoothed soils commonly occur on leveled land and fill landforms.



Property at 49 Birch Road, Darien, CT
sketch map of Inland Wetlands & soil types
field identified on May 26, 2015
Thomas W. Pietras, Soil Scientist

Soil Map—State of Connecticut
(49 Birch Road)



Map Scale: 1:1,340 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 21, 2014—Aug 27, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
3	Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony	1.3	14.8%
60B	Canton and Charlton fine sandy loams, 3 to 8 percent slopes	0.1	0.6%
61C	Canton and Charlton fine sandy loams, 8 to 15 percent slopes, very stony	1.1	11.8%
73C	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	4.2	46.9%
84B	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes	2.3	25.9%
Totals for Area of Interest		**9.0**	**100.0%**

State of Connecticut

84B—Paxton and Montauk fine sandy loams, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2t2qn
Elevation: 0 to 1,570 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Paxton and similar soils: 55 percent
Montauk and similar soils: 30 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton

Setting

Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest, nose slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Ap - 0 to 8 inches: fine sandy loam
Bw1 - 8 to 15 inches: fine sandy loam
Bw2 - 15 to 26 inches: fine sandy loam
Cd - 26 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 39 inches to densic material
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: C
Ecological site: Well Drained Dense Till Uplands (F144AY007CT)
Hydric soil rating: No

Description of Montauk

Setting

Landform: Drumlins, hills
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

A - 0 to 4 inches: fine sandy loam
Bw1 - 4 to 14 inches: fine sandy loam
Bw2 - 14 to 25 inches: sandy loam
2Cd1 - 25 to 39 inches: gravelly loamy coarse sand
2Cd2 - 39 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 38 inches to densic material
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: About 24 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: Well Drained Dense Till Uplands (F144AY007CT)
Hydric soil rating: No

Minor Components

Ridgebury

Percent of map unit: 5 percent
Landform: Hills, ground moraines, depressions, drainageways
Landform position (two-dimensional): Toeslope, backslope, footslope
Landform position (three-dimensional): Base slope, head slope, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Woodbridge

Percent of map unit: 5 percent
Landform: Hills, drumlins, ground moraines
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Charlton

Percent of map unit: 5 percent
Landform: Hills
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Data Source Information

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020

State of Connecticut

3—Ridgebury, Leicester, and Whitman soils, 0 to 8 percent slopes, extremely stony

Map Unit Setting

National map unit symbol: 2t2qt
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Ridgebury, extremely stony, and similar soils: 40 percent
Leicester, extremely stony, and similar soils: 35 percent
Whitman, extremely stony, and similar soils: 17 percent
Minor components: 8 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ridgebury, Extremely Stony

Setting

Landform: Drumlins, depressions, drainageways, hills, ground moraines
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 6 inches: fine sandy loam
Bw - 6 to 10 inches: sandy loam
Bg - 10 to 19 inches: gravelly sandy loam
Cd - 19 to 66 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 8 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 15 to 35 inches to densic material
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water storage in profile: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Wet Till Depressions (F144AY009CT)
Hydric soil rating: Yes

Description of Leicester, Extremely Stony

Setting

Landform: Ground moraines, depressions, drainageways, hills
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Concave
Parent material: Coarse-loamy melt-out till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 7 inches: fine sandy loam
Bg - 7 to 18 inches: fine sandy loam
BC - 18 to 24 inches: fine sandy loam
C1 - 24 to 39 inches: gravelly fine sandy loam
C2 - 39 to 65 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: None
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: High (about 9.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: B/D
Ecological site: Wet Till Depressions (F144AY009CT)
Hydric soil rating: Yes

Description of Whitman, Extremely Stony

Setting

Landform: Depressions, drainageways, hills, ground moraines, drumlins

Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oi - 0 to 1 inches: peat
A - 1 to 10 inches: fine sandy loam
Bg - 10 to 17 inches: gravelly fine sandy loam
Cdg - 17 to 61 inches: fine sandy loam

Properties and qualities

Slope: 0 to 3 percent
Percent of area covered with surface fragments: 9.0 percent
Depth to restrictive feature: 7 to 38 inches to densic material
Natural drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Salinity, maximum in profile: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water storage in profile: Low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Ecological site: Wet Till Depressions (F144AY009CT)
Hydric soil rating: Yes

Minor Components

Woodbridge, extremely stony

Percent of map unit: 6 percent
Landform: Ground moraines, drumlins, hills
Landform position (two-dimensional): Backslope, footslope, summit
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Swansea

Percent of map unit: 2 percent
Landform: Swamps, bogs
Down-slope shape: Concave
Across-slope shape: Concave

Hydric soil rating: Yes

Data Source Information

Soil Survey Area: State of Connecticut
Survey Area Data: Version 20, Jun 9, 2020